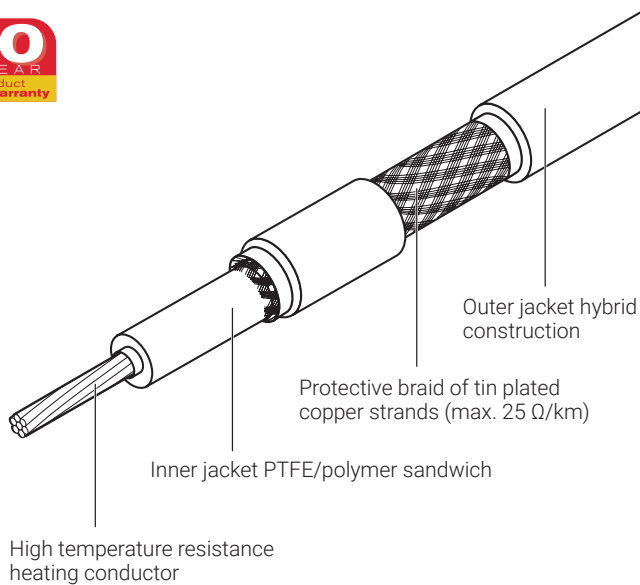


## Polymer insulated (PI) series resistance heating cable

### PRODUCT OVERVIEW



nVent RAYCHEM XPI-F is a polymer insulated (PI) series heating cable, suitable for use in ordinary and hazardous areas. It has been designed for freeze protection and low temperature maintenance applications on pipes, tanks and other equipment.

XPI-F offers an economical solution for a wide variety of heat-tracing applications, in particular for pipe lengths beyond the maximum circuit lengths of parallel heating cables.

The inner insulation is a sandwich construction of PTFE and PE, the outer insulation is a hybrid PE construction. The use of PTFE in the construction makes it very easy to terminate, provides flexibility, eliminates internal mechanical and thermal stress and makes XPI-F a very safe and reliable product. The PE provides a good chemical withstand and excellent mechanical strength.

XPI-F heating cables can be used for temperatures up to 90°C (continuous) and 100°C (intermittent short-term exposure), making it an ideal PI heating cable for transfer lines and large tanks with limited temperature requirements.

XPI-F is easy to install and has printed meter-marks. nVent offers XPI-F heating cables in a wide range of resistances, starting from 1.8 Ω/km up to 200 Ω/km as well as a complete range of components for connection and splicing.

### Application

Chemical resistance                      Organic corrosives

### PRODUCT SPECIFICATIONS

#### Technical details

|                               |  |
|-------------------------------|--|
| Max. exposure temperature     | 90°C (power off, continuous), 100°C (power off, intermittent for max 1000 h) |
| Min. installation temperature | -60°C  |
| Min. bending radius at -55°C  | 7.5 x cable diameter   |
| Max. power output             | 20 W/m (typical value, depending on application)                             |
| Nominal voltage               | Up to 300/500 Vac (U0/U)   |
| Min. impact resistance        | 4 Joule (as per EN 60079-30-1)   |
| Min. clearance                | 20 mm between heating cables   |

## APPROVALS

For use in ordinary and hazardous area Zone 1 and Zone 2 (Gas), Zone 21 and Zone 22 (Dust)

### Temperature classification

T6 ... T2

nVent RAYCHEM heat-tracing products are approved for the listed temperature classifications by using the principles of stabilized design. Use TraceCalc design software or contact nVent.

### Product certification



More details about product certification, approvals and conditions of safe use are available in the installation manual for Polymer Insulated (PI) Series Constant Wattage Heating Cable Systems at [www.nVent.com/RAYCHEM](http://www.nVent.com/RAYCHEM).

## ORDERING INFORMATION

### XPI-F heating cable references

| Order reference | Nominal resistance<br>[ $\Omega$ /km @ 20°C] | Temp. coefficient<br>[ $\times 10^{-3}$ /K] | Outer diameter<br>[mm nom.] | Nom. weight<br>(kg/km) | Part number<br>PN |
|-----------------|--|---|-----------------------------|------------------------|-------------------|
| XPI-F-1.8       | 1.8  | 4.3   | 9.5                         | 208                    | 1244-018798       |
| XPI-F-2.9       | 2.9  | 4.3   | 7.8                         | 143                    | 1244-018799       |
| XPI-F-4.4       | 4.4  | 4.3   | 7.2                         | 112                    | 1244-018800       |
| XPI-F-7         | 7  | 4.3   | 6.6                         | 83                     | 1244-018801       |
| XPI-F-10        | 10   | 4.3   | 6.5                         | 76                     | 1244-018802       |
| XPI-F-11.7      | 11.7   | 4.3   | 6.4                         | 65                     | 1244-018803       |
| XPI-F-15        | 15   | 4.3   | 6.1                         | 61                     | 1244-018804       |
| XPI-F-17.8      | 17.8   | 4.3   | 6                           | 57                     | 1244-018805       |
| XPI-F-25        | 25   | 3   | 6                           | 57                     | 1244-018806       |
| XPI-F-31.5      | 31.5   | 1.3   | 6.4                         | 67                     | 1244-018807       |
| XPI-F-50        | 50   | 1.3   | 6                           | 57                     | 1244-018808       |
| XPI-F-65        | 65   | 1.3   | 5.7                         | 53                     | 1244-018809       |
| XPI-F-80        | 80   | 0.7   | 6.1                         | 61                     | 1244-018810       |
| XPI-F-100       | 100  | 1.3   | 5.4                         | 67                     | 1244-018811       |
| XPI-F-150       | 150  | 0.4   | 5.9                         | 48                     | 1244-018812       |
| XPI-F-200       | 200  | 0.4   | 5.6                         | 53                     | 1244-018814       |

Resistance tolerance: +10/-5%. In particular for cables < 31.5  $\Omega$ /km the resistance of the conductor materials is a function of temperature and the change must be considered for design purposes.

### Recommended cold lead cables for XPI-F (Cold lead cables from XPI can be used alternatively)

| Order reference | Nominal resistance<br>[ $\Omega$ /km @ 20°C] | Temperature coefficient<br>[ $\times 10^{-3}$ /K] | Outer diameter<br>[mm nom.] | Nom. cross section [mm <sup>2</sup> ] | Current rating [A] | Part number<br>PN |
|-----------------|--|---|-----------------------------|---------------------------------------|--------------------|-------------------|
| XPI-F-7         | 7  | 4.3   | 6.6                         | 2.5                                   | 32                 | 1244-018801       |
| XPI-F-4.4       | 4.4  | 4.3   | 7.2                         | 4                                     | 42                 | 1244-018800       |
| XPI-F-2.9       | 2.9  | 4.3   | 7.8                         | 6                                     | 54                 | 1244-018799       |
| XPI-F-1.8       | 1.8  | 4.3   | 9.5                         | 10                                    | 73                 | 1244-018798       |

**Notes:** Delivery length depends on type of resistance and is limited by max. weight of 120 kg/spool, respectively 1000 m/run. To ensure practical and safe on-site handling, it is strongly recommended to limit spool lengths to 25 - 30 kg. Not all resistances are standard items and as such may not be in stock. Contact nVent to confirm lead time. nVent requires the use of a 30 mA residual current device to provide maximum safety and protection from fire.

Where design results in higher leakage current, the preferred trip level for adjustable devices is 30 mA above any inherent capacitive leakage characteristic of the heater as specified by the trace heater supplier or alternatively, the next common available trip level for non adjustable devices, with a maximum of 300 mA. All safety aspects need to be proven.

**North America**

Tel +1.800.545.6258  
Fax +1.800.527.5703  
thermal.info@nVent.com

**Europe, Middle East, Africa**

Tel +32.16.213.502  
Fax +32.16.213.604  
thermal.info@nVent.com

**Asia Pacific**

Tel +86.21.2412.1688  
Fax +86.21.5426.3167  
cn.thermal.info@nVent.com

**Latin America**

Tel +1.713.868.4800  
Fax +1.713.868.2333  
thermal.info@nVent.com



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